

thousand species of seed plants, ferns, bryophytes, lichens and fungi. The geographic records of the species are an important contribution but the catalogue of the collections is much more than that. The nomenclature and bibliography have received careful attention and the taxonomic work has been critical. Several new species are described and comments on old ones are frequent.

There is a chapter on cytology which deals with sixty species and illustrates the somatic chromosomes of nineteen of them. The chapter on phytogeography presents an excellent account of the vegetation and a detailed comparison of the floristic relations between the eastern Himalaya and Japan. This latter study involves over two hundred and fifty Himalayan species and their Japanese counterparts.

A series of photographs, twenty-one of them in color, illustrate the principal vegetational features, selected species and floral details.

This book will not only be widely used by botanists concerned with the Himalayan flora directly but will be of special interest to those interested in the eastern North American flora and its relationship to eastern Asia.

Dr. Hara and his thirty-seven colleagues who contributed to the book are to be congratulated for this fine publication.

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A NEW STATION FOR HAMAMELIS VIRGINIANA L. IN MINNESOTA. — Common witch-hazel (*Hamamelis virginiana* L.) is widely distributed in eastern North America reaching the northwest limit of its range in Minnesota. Until recently it has been known only from Winona and Houston counties in the extreme southeast corner of the state.

In 1960 Mr. Richard Brand, county agent of Todd County in central Minnesota requested verification of the identification of a witch-hazel plant found on a farm of Mr. Leon

Robideau in Gray Eagle Township in that county (SW $\frac{1}{4}$ of the NW $\frac{1}{4}$, Sec. 24, T. 127N, R 32W). Information from Mr. Robideau, confirmed by Mr. Brand, indicated that this was a wild shrub growing in a wooded area never subjected to cultivation. Mr. Robideau further commented that this was the only known specimen on his farm and that no others were known to exist in the vicinity. This occurrence is a range extension of approximately 200 miles northwest of the nearest previously known station in Minnesota at Quinn's Bluff, Winona County, and about 100 miles west of the nearest approach of witch-hazel in Polk County, Wisconsin.

To obtain propagating material for the perpetuation of this unusual witch-hazel plant the site was visited on October 19, 1963. Accompanied by Mr. Robideau we found the plant along a trail on his farm. Associated trees consisted in part of Ironwood (*Ostrya virginiana* (Mill.) K. Koch), Blue-Beech (*Carpinus caroliniana* Walt.), Quaking-Aspen (*Populus tremuloides* Michx.), Paper-Birch (*Betula papyrifera* Marsh.), Red Oak (*Quercus rubra* L.), Bur-Oak (*Q. macrocarpa* Michx.), American Hazel (*Corylus americana* Walt.), Prickly-Ash (*Zanthoxylum americanum* Mill.), Wolfberry (*Symphoricarpos occidentalis* Hook.), and Leatherwood (*Dirca palustris* L.) were common associated shrubs.

The witch-hazel plant was about 12 feet high, apparently quite old, as evidenced by the much thickened base and rotten stubs of former stems. The shrub was composed of several stems up to 4" in diameter and of a number of sprouts of moderate vigor. The plant was in flower at the time of observation but no fruit was present. The flowers of *Hamamelis* are perfect and self-incompatibility may be the factor involved in the failure to produce seed.

Although fruit was absent, a number of fruit-like spiny galls was noted on the sterile fruit pedicels. These are produced by the spiny witch-hazel gall aphid, *Hamamelistes spinosus* Shimer, an insect with a complex life cycle alternating between birch (in this case *Betula papyrifera*) and

witch-hazel. The presence of this insect on an isolated plant suggests that until comparatively recent times there may have existed a more or less continuous population of witch-hazel between the Grey Eagle station and the present general northwest limit of the species along the St. Croix and Mississippi Rivers.

Although no seed was obtained from this outlier specimen of witch-hazel, the plant had been propagated in a modest way by Mr. Robideau through the removal of rooted basal sprouts. Two small plants thus obtained had been planted near the farm house on the property. One of these Mr. Robideau presented to the University of Minnesota Landscape Arboretum. Cuttings obtained at the time of this visit rooted satisfactorily in a sand propagating bench but failed to become established when transferred to soil under greenhouse conditions.

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